

## **REMARKS**

Claims 1-11 are pending in the application. Claim 1 has been amended to correct obvious typographical errors. Claim 5 has been amended to indicate that the molecular weight of component A4 is from 62-200. The amendment is supported at page 7, line 28 of the specification. Claims 5 and 6 have been amended to indicate that the claimed percentages are weight percentages. Support for these amendments can be found at, for example, page 5, lines 11-12, page 7, line 7, page 7, line 30, page 9, lines 5-6 and page 10, lines 22-24.

### **Rejection Under 35 U.S.C. § 112, second paragraph**

Claim 1 stands rejected under 35 U.S.C. § 112, second paragraph as being unclear due to obvious typographical errors. The unclear items have been amended as suggested by the Examiner, therefore the rejection should be withdrawn.

Claim 5 stands rejected under 35 U.S.C. § 112, second paragraph because the molecular weight ranges of A2 and A4 both include 400. Claim 5 has been amended to indicate that A4 has a molecular weight range of from 62-200, therefore, the ranges no longer overlap and the rejection should be withdrawn.

Claims 5 and 6 stand rejected under 35 U.S.C. § 112, second paragraph because it is not indicated if the percentages are based on mole or weight. Claims 5 and 6 have been amended to indicate that all percentages are weight percentages. Therefore, the rejection should be withdrawn.

### **Rejection Under 35 U.S.C. § 103(a)**

Claims 1-11 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,126,393 to Blum et al. (hereinafter "Blum") in view of European Patent Specification 0 159 117 B1 to Hughes et al. (hereinafter "Hughes"). The Examiner asserts that it would have been obvious to use the pyrazole blocking agents disclosed by Hughes in the water dispersible binder compositions disclosed by Blum in order to obtain a coating system that is less expensive to apply.

In the present invention, Applicants looked to address the problem of yellowing and storage stability of resins based on blocked polyisocyanates. Applicants addressed these problems in the present invention. Surprisingly, it was found that polyisocyanates blocked with pyrazole derivatives can be dispersed in a

stable manner in water with the aid of polyols containing urethane groups. In this case, the polyols according to the invention and containing urethane groups fulfil the function of an "emulsifier" for the polyisocyanates blocked with pyrazole derivatives. At the same time, however, the polyols containing urethane groups are reactants for the blocked polyisocyanates. After the blocking agent has been split off at elevated temperature, the OH groups crosslink with the functional groups of the polyisocyanate crosslinking agents then liberated. (see page 2, lines 9-21 of the specification).

As such, the present invention provides a waterborne coating composition in the form of a dispersion in water and optionally organic solvents. The composition includes at least one polyol having urethane groups and chemically bound hydrophilic groups, and at least one polyisocyanate having no chemically bound hydrophilic groups and which is blocked with pyrazole derivatives.

Blum discloses a water-dispersible binder composition which contains a urethane-modified polyester resin containing carboxyl groups, a crosslinker resin and an optional emulsifier. The urethane-modified polyester resin is produced by reacting a polyester polyol having a hydroxyl value of 130 to 200 with a 2,2-bis-(hydroxymethyl)alkanecarboxylic acid or a quantity corresponding to this quantity of acid of a tertiary amine salt of such acid and at least one cycloaliphatic diisocyanate having a molecular weight of 166 to 294. Blum is silent regarding pyrazole type blocking agents.

Hughes discloses a polyisocyanate blocked using pyrazole derivatives. Hughes indicates that the advantage of pyrazole blocked polyisocyanates is that they will react at lower temperatures than polyisocyanates blocked with other compounds.

The Examiner has taken the position that it would have been obvious to utilize the pyrazole blocking agents of Hughes within the water-dispersible binder of Blum in order to obtain a coating system that is less expensive to apply.

The Examiner's rationale is flawed however, because applicants were not seeking to provide a coating system that is less expensive to apply *per se*. Applicants sought to provide a non-yellowing, storage stable resin based on blocked

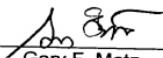
polyisocyanates. These performance criteria have nothing to do with the cost to apply a coating. As such, one skilled in the art would not look to coatings that cost less to apply in order to discover blocked isocyanate resins that do not yellow and are storage stable.

The Examiner has failed to provide a nexus between the disclosures of Blum and Hughes that would motivate a skilled artisan looking to discover blocked isocyanate resins that do not yellow and that are storage stable to modify the references as the Examiner has.

The Examiner has used Applicants invention as a template to combine prior art references in order to allege obviousness, which is not proper. Therefore, Claims 1-11 are not obvious over the combination of Blum and Hughes and rejection under 35 U.S.C. § 103(a) should be withdrawn.

In view of the above amendments and remarks, reconsideration of the rejections and allowance of Claims 1-11 are respectfully requested.

Respectfully submitted,

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